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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/577,888	03/23/2007	Adam Gronowski	CH8451/PS1133	6920
7590 Lanxess Corporation Law & IP Department 111 RIDC Park West Drive Pittsburgh, PA 15275-1112			EXAMINER SCOTT, ANGELA C	
			ART UNIT 1796	PAPER NUMBER
			MAIL DATE 11/28/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	Application No. 10/577,888	Applicant(s) GRONOWSKI ET AL.	
	Examiner Angela C. Scott	Art Unit 1796	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 23 March 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☒ Claim(s) 7 and 8 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>04/07</u> .   | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Claim Objections***

Claims 7 and 8 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim cannot depend from any other multiple dependent claim. See MPEP § 608.01(n). Accordingly, the claims 7 and 8 have not been further treated on the merits.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kaszas (WO 02/16452) in view of Gronowski (US 2001/0041780).

Kaszas teaches a butyl polymer being derived from a reaction mixture comprising a C<sub>4</sub> to C<sub>7</sub> monoolefin monomer, a multiolefin <sup>cross</sup>~~cross~~-linking agent and a chain transfer agent (Page 8, lines 25-34). The reaction mixture can be mixed in the presence of an aliphatic hydrocarbon diluent (Page 18, lines 1-17). The butyl polymer can also be mixed with carbon black or silica (fillers) as well as with a conventional curing agent in a conventional manner to produce vulcanizates (Page 19, lines 22-29).

Kaszas does not teach that the elastomeric polymer has an average molecular weight of more than 20,000 g/mol. However, Gronowski et al. does teach that the butyl rubber polymers have a weight average molecular weight greater than 400,000 (¶20). Kaszas and Gronowski are combinable because they are from the same field of endeavor, namely that of butyl rubber compositions. At the time of the invention, a person of ordinary skill in the art would have found it obvious to use polymers with a molecular weight, as taught by Gronowski, in the composition, as taught by Kaszas, and would have been motivated to do so in order to ensure that the transition temperatures and the mechanical properties will be sufficient to give the polymer material useful commercial applications.

The Office recognizes that all of the claimed effects and physical properties are not positively stated by the reference, specifically that the polymer contains less than 15 weight percent of solid matter insoluble in boiling cyclohexane under reflux for 60 minutes. However, the reference teaches all of the claimed ingredients. Therefore, the claimed effects and physical properties would implicitly be achieved by combining the disclosed ingredients. If it is applicant's position that this would not be the case: (1) evidence would need to be presented to support applicant's position; and (2) it would be the examiner's position that the application

contains inadequate disclosure that there is no teaching as to how to obtain the claimed properties and effects by combining only these ingredients.

Claims 4-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kaszas (WO 02/16452) in view of Gronowski (US 2001/0041780) and Greco et al. (US 4,524,187).

Regarding claims 4 and 5, Kaszas teaches a butyl polymer being derived from a reaction mixture comprising a C<sub>4</sub> to C<sub>7</sub> monoolefin monomer such as isobutylene, 2-methyl-1-butene, 3-methyl-1-butene, 2-methyl-2-butene, 4-methyl-1-pentene and mixtures thereof (Page 14, lines 17-20), a multiolefin <sup>cross</sup>~~cross~~-linking agent and a chain transfer agent (Page 8, lines 25-34). The butyl polymer can also be mixed with carbon black or silica (fillers) (Page 19, lines 22-29). These butyl rubbers may be used for the production of vulcanized rubber products (shaped articles) (Page 19, lines 22-23).

Kaszas does not teach that the elastomeric polymer has an average molecular weight of more than 20,000 g/mol. However, Gronowski et al. does teach that the butyl rubber polymers have a weight average molecular weight greater than 400,000 (¶20). Kaszas and Gronowski are combinable because they are from the same field of endeavor, namely that of butyl rubber compositions. At the time of the invention, a person of ordinary skill in the art would have found it obvious to use polymers with a molecular weight, as taught by Gronowski, in the composition, as taught by Kaszas, and would have been motivated to do so in order to ensure that the transition temperatures and the mechanical properties will be sufficient to give the polymer material useful commercial applications.

The Office recognizes that all of the claimed effects and physical properties are not positively stated by the reference, specifically that the polymer contains less than 15 weight percent of solid matter insoluble in boiling cyclohexane under reflux for 60 minutes. However, the reference teaches all of the claimed ingredients. Therefore, the claimed effects and physical properties would implicitly be achieved by combining the disclosed ingredients. If it is applicant's position that this would not be the case: (1) evidence would need to be presented to support applicant's position; and (2) it would be the examiner's position that the application contains inadequate disclosure that there is no teaching as to how to obtain the claimed properties and effects by combining only these ingredients.

Regarding claim 6, Kaszas does not teach that the shaped article has a supporting means. However, Greco et al. does teach that isobutylene polymers can be used as sealants, coverings or films (Col. 7, lines 43-44) and these products are typically layered on a supporting means. Kaszas and Greco et al. are combinable because they are from the same field of endeavor, namely that of isobutylene polymers. At the time of the invention, a person of ordinary skill in the art would have found it obvious to make the above products, as taught by Greco et al., out of the composition, as taught by Kaszas, and would have been motivated to do so because the composition is well suited to these types of products.

### *Correspondence*


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Angela C. Scott whose telephone number is (571) 270-3303. The examiner can normally be reached on Monday through Friday, 7:30am to 5:00pm EST.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Eashoo can be reached on (571) 272-1197. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

ACS   
November 19, 2007

  
MARK EASHOO, PH.D.  
SUPERVISORY PATENT EXAMINER

11/24/07